João Carlos Ferreira Gonçalves

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Education

- 21 September 2009 to 27 September 2012 - MSc in Informatics Engineering, University of Coimbra. Final classification of 16 points.

- 18 September 2006 to 21 July 2010 - BSc in Informatics Engineering (after Bologna Process), University of Coimbra. Final classification of 14 points.

- 9 September 2002 to 13 July 2006 - BSc in Informatics Engineering (before Bologna Process), University of Coimbra.

Developed work

- Development of Support Vector Machines (SVMs) in Graphics Processing Units for Pattern Recognition – MSc dissertation - integrated in open source library GPUMLib at http://gpumlib.sourceforge.net. Final classification of 19 points.

- OpenGL shadow mapping engine with third degree path interpolation – developed in Computer Graphics course. Final classification of 18 points.

- Goal based Artificial Intelligence simulation with agent negotiation and 3D interface (OpenGL back-end) – developed in Artificial Intelligence course. Final classification of 17 points.

- Hardware Finder and Suggester, a Web 3.0 project – developed in the Semantic Web course. Final classification of 16 points.

- Bejeweled 3D game (OpenGL back-end) – developed for the Object Oriented Programming course. Final classification of 95%.

Technical skills

- C, C++, Java (SE and EE), JavaScript, Scheme, Common Lisp, Matlab, Basic, Pascal, Tcl
- OpenMP, MPI, Pthreads, Java Concurrent, Vectorization (SSE)
- CUDA, OpenCL, OpenGL, jPCT, VRML
- Support Vector Machines, Neural Networks, Radial Basis Function Networks, Bayesian Inference, Feature Reduction (PCA, Kernel PCA, LDA, GDA, Kruskal Wallis)
- SQL, Oracle Database and MySQL
- XML, HTML, JSP, Servlets and PHP

- RDF/RDFS, RDFa, OWL, SPARQL, JENA, ARQ, TDB
- LaTeX
- Z80 (machine code), Atmel AVR (arduino 8 bit) and MIPS32 (SPIM emulator) assembly
- SVN and Mercurial
- Google Sketchup, Right Hemisphere Deep Exploration, Wings 3D, AC3D
- NS-2 Network Simulator
- Sony Vegas, Adobe Photoshop, Inkscape, Adobe Audition, Microsoft Office, Minitab, Native Instruments Reaktor
- Electronics (basic knowledge)

Publications in International Conferences

- João Gonçalves, Noel Lopes and Bernardete Ribeiro, "Multi-Threaded Support Vector Machines for Pattern Recognition", in International Conference on Neural Information Processing, LNCS, Springer, November 2012, 2012

- Noel Lopes, Bernardete Ribeiro and João Gonçalves, "*Restricted Boltzman Machines and Deep Belief Networks on Multi-Core Processors*", in IEEE World Congress on Computational Intelligence (WCCI 2012), IEEE, Brisbane, Australia, 2012

Personal skills

- Quick learner
- Team work
- Highly Organized
- Determination
- Helpful
- Optimistic

Professional skills

- High Performance Computing
- Machine Learning
- Computer Graphics
- Data Mining
- Artificial Intelligence
- Semantic Web
- Network Simulation
- Data Compression
- 3D Modelling
- Electronics

Languages (ILR scale)

- Portuguese (native or bilingual proficiency)
- English (full professional proficiency)
- Spanish (elementary proficiency)
- German (elementary proficiency)

Hobbies and interests

- Music Composition
- Photography
- Arts
- Travelling
- History